

COUNTRY USSR DATE DISTR. 26 May 1948

SUBJECT Technological Information: Soviet Experiments- NO. OF PAGES 1
tion and Results in Substitute Non-Ferrous Metals

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1. Experiments are being conducted in several factories in the Vladivostok area in an effort to replace non-ferrous metals such as tin, which is in inadequate supply in the USSR, with suitable substitutes to be used in the manufacture of machinery and automobile parts.
 2. The use of substitute metals in two factories near Vladivostok--the Metarist /? Metallist/ Machinery Factory and the Brake Machinery Factory--had progressed to such an extent by April 1947 that 250 tons of tin, 320 tons of copper, 280 tons of brass and 345 tons of aluminum had been saved.
 3. Although the quality of the substitutes is questionable in some cases, in general they compare favorably with the original metal. For example, at the Brake Machinery Factory, spark plugs made from pig iron have been found to have four times the life of those made of bronze.
 4. Another example of substitution is the use of a cheap alloy in the production of diesel engine and tractor bearings /factory unstated/ which had formerly been made from a bronze alloy containing a high percentage of tin. At the Metarist /sic/ Machinery Factory a wrought iron substitute for tin and bronze is used for making machine parts. An alloy of graphite and steel /high carbon steel/ has been successfully used in replacing bronze in the production of gears for electric tractors used underground /? mining machinery/. Tests have shown that the alloy gears, tempered in electric furnaces and turned on ordinary lathes, are durable and not easily cracked.

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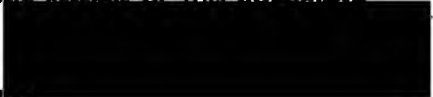
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